CHAPTER 13
CHEMICAL WARFARE MATERIEL

13-1. Introduction. This chapter presents general guidance for the project team on projects involving non-stockpile chemical warfare materiel (CWM). This guidance applies to those sites where the probability of encountering CWM is categorized as occasional, probable, or frequent (as defined in AR 385-10, The Army Safety Program). OE response activities at sites where the probability of encountering CWM is categorized as improbable or remote may be conducted using the conventional OE response process if the District Commander or designated representative assumes the associated risk. If the District Commander or designated representative does not assume the associated risk, the OE response activities at the site will be conducted by the USAESCH Design Center.

13-2. Responsibilities.

a. OE response actions at non-stockpile CWM sites will be performed in accordance with ER 1110-1-8153. The USACE is responsible for the overall project management and on-site management for non-stockpile CWM projects. The USAESCH Design Center is the only USACE command authorized to execute non-stockpile CWM projects. The specific responsibilities of the HQUSACE, MSCs, districts, USAESCH Design Center, and OE MCX for non-stockpile CWM activities are presented in ER 1110-1-8153.

b. If the presence of CWM is suspected at a site, the PM must coordinate with USAESCH prior to beginning any on-site work. If non-stockpile CWM is encountered during activities at any site, all site activities will be stopped and a CWM response action will be initiated. For additional information on the procedures for conducting a non-stockpile CWM response, contact the OE MCX.

13-3. Project Considerations Specific to Non-Stockpile CWM Sites.

a. The OE response process at sites containing non-stockpile CWM typically follows the same procedures as those followed for conventional OE. EP 1110-1-18 provides a description of those areas of the OE response process where a different approach is required for non-stockpile CWM sites as compared to conventional OE sites.

b. The scope and intent of proposed activities along with the probability of encountering CWM are factors in determining what type of planning documents are required. For additional information on the planning requirements for various proposed activities at non-stockpile CWM sites, contact the OE MCX.

c. Safety Submission. For investigative and assessment activities (e.g., soil and water sampling, geophysical analysis, monitoring well installation, etc.) which are conducted using ordnance avoidance techniques, a SSHP approved by the OE MCX is required. Additional

documents may be required depending on site-specific characteristics and planned activities. For surface removal or excavation of non-stockpile CWM when the intent is to uncover, characterize, and remove geophysical anomalies, a Safety Submission approved by HQUSACE is required. The Safety Submission provides the specifications for conducting work activities at the site. ER 1110-1-8153 delineates the contents and organizational responsibilities for the safety submission. Additional information is available from the OE MCX. The Safety Submission includes the Work Plan, the SSHP, and Supporting Plans.

(1) Work Plan. The requirements for the Work Plan are similar to those outlined in Chapter 3 of this manual for the Removal Action Work Plan. Additional information is provided in ER 1110-1-8153.

(2) SSHP. Refer to safety guidance documents and ER 1110-1-8153 for additional information on the SSHP.

(3) Supporting Plans. The Supporting Plans are prepared by government agencies and may include the plans listed below. Information on the contents of these plans is available from the OE MCX.

(a) Technical Escort Unit Support Plan;

(b) Edgewood Chemical and Biological Center Air Monitoring and Analysis Plan;

(c) Protective Action Plan;

(d) Project Manager for Non-Stockpile Chemical Materiel Plans (includes Interim Holding Facility Plan, Transportation Plan, and Disposal Plan); and

(e) Anomaly Review Board Plan (if appropriate).

d. In addition to the items requiring consideration at a conventional OE site which have been discussed in the other chapters of this manual, the project team must also include consideration of the following items at a non-stockpile CWM site: MCE, No Significant Effect (NOSE) distances, tabletop exercises, and pre-operational surveys. These items will be discussed in the Safety Submission.

(1) Maximum Credible Event. The USAESCH project team should develop a site-specific MCE as a basis for generating hazard zones. Hazard zones will be calculated using the MCE and the Army approved atmospheric dispersion modeling tool, D2PC. The project team should also develop quantitative RACs to assess response hazards (e.g., dispersion of agent-contaminated soil, and explosive hazards). Public risk information and controls will be addressed in safety planning documents.

(2) No Significant Effect (NOSE) Distance. The USAESCH project team must prepare NOSE calculations to design contingency plans and to determine the evacuation areas around a non-stockpile CWM site. The NOSE distance is defined as the distance beyond which the public would not experience any adverse health effects in association with a chemical agent release. For most CWM projects, the NOSE distance is significantly greater than the overpressure and fragmentation distances.

(3) Engineering controls. Engineering controls are used to improve personnel safety and/or to reduce the NOSE during removal operations. If an engineering control design is required, the USAESCH project team will arrange for the design with the USAESCH Engineering Directorate, Structural Branch.

(4) Tabletop Exercise. The Tabletop Exercise should be tailored to the expected conditions and hazards specific to the site. Tabletop Exercises, which are conducted to evaluate emergency plans and procedures and to resolve questions of coordination and responsibility, must be successfully completed prior to initiating any intrusive work. The Tabletop Exercise is to be conducted by the Major Command. Generally, this responsibility is delegated to USAESCH. USAESCH has a team from the OE MCX that conducts the Tabletop exercise and determines when it is concluded.

(5) Pre-operational Survey.

(a) A pre-operational survey consists of a formal review and assessment of an operation that has the potential for chemical agent exposure. The pre-operational survey will be tailored to the expected conditions and hazards specific to the site. If a Safety Submission is required, the pre-operational survey will be conducted by the Headquarters Department of the Army Safety Office or may be delegated to HQUSACE, in which case the USACE Safety Office will conduct the pre-operational survey with assistance from the OE MCX. If a Safety Submission is not required, the USAESCH Design Center will conduct the pre-operational survey.

(b) The USAESCH project team and the district will participate in the pre-operational survey, which must be successfully completed prior to initiating any intrusive work. The pre-operational survey is concluded once the survey team determines that any findings of potential deficiencies have been addressed.

(c) The PM will ensure that the pre-operational survey is scheduled well in advance and that a formal request is forwarded through channels to HQDA at least six weeks prior to the actual date.

ATTACHMENT 13-1
CWM CHECKLIST

Project Name: _____
Project Location: _____
Design Center POC: _____
Preparer's Name and Title: _____
Date of Preparation: _____

	Y	N	N/A
Planning Documents			
1. If investigative and assessment activities will be conducted using anomaly avoidance techniques, has a SSHP been approved by USAESCH?	_____	_____	_____
2. If surface removal or excavation of non-stockpile CWM will be conducted with the intent to uncover, characterize and remove geophysical anomalies, has a Safety Submission been approved by HQUSACE?	_____	_____	_____
3. If a Safety Submission is required, has the project team ensured that it includes the following items:			
• Work Plan (contents similar to Removal Action Work Plan described in Chapter 3 of this manual)? Refer to ER 1110-1-8153 for additional information.	_____	_____	_____
• SSHP? Refer to safety guidance documents and ER 1110-1-8153 for additional information on the SSHP.	_____	_____	_____
• Supporting Plans?	_____	_____	_____

	Y	N	N/A
Maximum Credible Event			
1. Has the project team developed a site-specific MCE as a basis for generating hazard zones?			
2. Have hazard zones been calculated using the MCE and the Army approved atmospheric dispersion modeling tool, D2PC?			
3. Has the project team developed quantitative RACs to assess response hazards (e.g., dispersion of agent-contaminated soil, and explosive hazards)?			
4. Do the planning documents address this public risk information and controls?			
No Significant Effect Distance			
1. Has the project team prepared NOSE calculations to design contingency plans and to determine the evacuation areas around the site?			
Engineering Controls			
1. If an engineering control design is required, has the project team arranged for a design with the USAESCH Engineering Directorate, Structural Branch?			
Tabletop Exercise			
1. Prior to initiating intrusive activities, has the district conducted successful tabletop exercises for the USAESCH project team, OE MCX and other Army agencies and local responders involved in or supporting the activity?			
Pre-operational Survey			
1. Has a formal request for the pre-operational survey been forwarded through channels to HQDA at least six weeks prior to the actual date?			
2. Prior to initiating intrusive activities, have the project team and district successfully participated in a pre-operational survey?			